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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/712,389      | 11/13/2000  | Hung Chih Chen       | 5304/449001         | 9003             |

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APPLIED MATERIALS, INC.  
2881 SCOTT BLVD. M/S 2061  
SANTA CLARA, CA 95050

EXAMINER

NGUYEN, DUNG V

ART UNIT PAPER NUMBER

3723

DATE MAILED: 04/13/2004

17

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/712,389

Applicant(s)

CHEN ET AL

Examiner

Dung V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 3,5-8 and 13-40 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3,5-8,13-17,23,24 and 26-34 is/are allowed.
- 6) ☒ Claim(s) 18,19,25,35,36 and 40 is/are rejected.
- 7) ☒ Claim(s) 20-22 and 37-39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 16.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 18, 19, 25, 35, 36 and 40 are rejected under 35 U.S.C. 102(e) as being anticipated by Korovin et al (USPN 6,390,905). Korovin et al discloses a carrier head 305 comprising a base assembly 154, a flexible membrane 300 having a generally circular main portion with a lower surface that provides a substrate-mounting surface, an outer annular portion 104 extending from an edge of the main portion and secured to the base assembly 154, and an inner annular portion 103 extending from the main portion and secured to the base assembly 154, the volume between the base assembly 154 and the flexible membrane 300 forming a plurality of pressurizable chambers 111-114, the inner annular portion 103 including a widened section 101c adjacent a juncture

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between the inner annular portion 103 and the main portion, wherein the inner annular portion includes a horizontal portion extending from the base assembly 154 to the widened section 101c (note Fig 3 and 7, col. 7, lines 49-58 and col. 8, lines 43-57).

***Allowable Subject Matter***

4. Claims 3, 5-8, 13-17, 23, 24, 26-34 are allowed.
5. Claims 20-22 and 37-39 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
6. The following is a statement of reasons for the indication of allowable subject matter: the art of record considered as a whole alone or in combination neither anticipates nor renders obvious, a loading chamber controlling the position of the base assembly relative to the housing, in combination with the rest of the limitation in claims 3 and 7; the art of record considered as a whole alone or in combination neither anticipates nor renders obvious, a notch positioned and configured to reduce downward load transmitted from one of the chambers through the annular flap of the flexible membrane to the main portion so as to reduce compressions in the main portion, in combination with the rest of the limitation in claims 5 and 13; the art of record considered as a whole alone or in combination neither anticipates nor renders obvious, a first notch is formed at a juncture between the annular portion and the main portion and a second notch is formed at about mid-point of the annular portion, in combination with the rest of the limitation in claim 15; the art of record considered as a whole alone or in combination neither anticipates nor renders obvious, a first flap connected to a top

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vertex of the outer annular portion and second flap connected to a second vertex of the outer annular portion, in combination with the rest of the limitation in claim 23; the art of record considered as a whole alone or in combination neither anticipates nor renders obvious, the inner annular portion including a notch, in combination with the rest of the limitation in claims 17 and 24; the art of record considered as a whole alone or in combination neither anticipates nor renders obvious, the annular flaps includes a notch adapted to allow the annular flaps to flex when the pressure is unequal in adjacent pressurizable chambers, in combination with the rest of the limitation in claims 26, 28, 30 and 31.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DVN  
April 7, 2004



**DUNG VAN NGUYEN**  
**PRIMARY EXAMINER**